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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,257	09/22/2003	Kazuhiro Umeki	242933US3	9510

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EXAMINER

KUHNS, ALLAN R

ART UNIT PAPER NUMBER

1732

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/666,257

Applicant(s)

UMEKI, KAZUHIRO

Examiner

Allan Kuhns

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) 28-31 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 4, 10, 11, 14 and 16-27 is/are rejected.  
7) ☒ Claim(s) 2, 3, 5-9, 12, 13 and 15 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 021104.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

1.Applicant's election without traverse of Group I, claims 1-27 in the reply filed on June 16, 2006 is acknowledged.

2.Claims 28-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 16, 2006.

3.The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.Claims 16-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kane (4,528,260). Kane discloses the claimed method for fabricating an article from an object material including an object fine surface structure having one or more elements including (1) a first step of fabricating a surface structure substrate by forming a preliminary surface structure on the object material, the preliminary surface structure having elements corresponding to the elements of the object fine surface structure, (2) a second step of fabricating a mold from a mold material, the mold including a fine surface structure having elements equivalent to the elements of the object fine surface structure in shape, and (3) a third step of fabricating the article by transferring shapes of the elements of the fine surface structure of the mold to the corresponding elements of the preliminary surface structure on the surface structure substrate to form the elements of the object fine surface structure.

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Kane teaches wet or dry etching, as in claim 17, 20, 21 and 24, at column 2, lines 40-45. Kane also teaches the use of a curable resin (including a light curable resin), as in claims 18, 19, 22 and 23, forming the surface structure on a plate, as in claim 25, the surface treatment, as in claim 27, and it is submitted that the shrinkage of claim 26 is inherent in the process of Kane.

5.Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Jarboe et al. (4,847,026). Jarboe et al. disclose the basic claimed method for fabricating an article from an object material including an object fine surface structure having one or more elements including (1) a first step of fabricating a surface structure substrate by forming a preliminary surface structure on the object material, the preliminary surface structure having elements corresponding to the elements of the object fine surface structure, (2) a second step of fabricating a mold from a mold material, the mold including a fine surface structure having elements equivalent to the elements of the object fine surface structure in shape, and (3) a third step of fabricating the article by transferring shapes of the elements of the fine surface structure of the mold to the corresponding elements of the preliminary surface structure on the surface structure substrate to form the elements of the object fine surface structure.

6.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 10, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zuccato (4,867,922). Zuccato discloses or suggests the basic claimed method for fabricating an article from an object material having an object size including (1) a first step of fabricating a first mold from a first material, the first mold including a fine surface structure corresponding to the object fine surface structure and having a first size less than the object size (note the formation of a reduced scale  $3/8$  model disclosed at column 3, lines 57-68), and a second step of fabricating a second mold by transferring the fine surface structure of the first mold to a second material so that the fine surface structure transferred to the second material has a second size greater than the first size and less than the object size (note the doubling disclosed at column 4, lines 13-22, which one of ordinary skill in the art would recognize as producing a  $3/4$  scale model). Zuccato also teaches the translating of data into a full size surface at column 4, line 27. Given this teaching, it would have been obvious to one of ordinary skill in the art to perform further scale up in a third step to transfer the surface structure to an object having the full object size.

Further, it would have been obvious to repeat the process of Zuccato, as in claim 4, to test different styles, and to form a plate-like structure, as in claim 11. Zuccato teaches the use of a plastic material, as in claim 10.

8. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (571) 272-1202. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Allan R. Kuhns*  
ALLAN R. KUHN'S  
PRIMARY EXAMINER AU 1732  
8-24-06